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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,254	12/09/2003	Maurits Van Der Schaar	081468-0307120	3339
909 7590 09/15/2008 PILLSBURY WINTHROP SHAW PITTMAN, LLP P.O. BOX 10500 MCLEAN, VA 22102				
EXAMINER HARTMAN JR, RONALD D				
ART UNIT 2121		PAPER NUMBER		
MAIL DATE 09/15/2008		DELIVERY MODE PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/730,254

Applicant(s)

SCHAAR ET AL.

Examiner

RONALD D. HARTMAN JR

Art Unit

2121

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 and 18-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-14 and 16-17 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/S508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11-14 and 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Irie et al., U.S. Patent No. 5,525,808.

Claim 11 recites "A lithographic apparatus comprising:

- a projection system configured to project a patterned beam of radiation onto a target portion of a substrate;
- sensor; and
- a processing unit arranged to communicate with the sensor; and

a beam generator arranged to project an alignment beam to at least one of a plurality of alignment marks, of which desired positions are known, wherein the sensor is arranged to measure positional parameters for each of the plurality of alignment marks based on the projected alignment beam and to transfer the measured positional parameters to the processing unit, wherein the processing unit is arranged to determine at least one parameter of a model providing information about a position of the substrate, based on the measured positional parameters, wherein the measured positional parameters are weighted with weighing coefficients, and wherein the processing unit is arranged to determine a numerical value of at least one of the weighing coefficients together with the at least one parameter of the model."

As best understood, this apparatus is anticipated by Irie et al. (e.g. See Figures 2-3 and their corresponding textual descriptions; also see C5 L1-24).

As per claim 12, Irie et al. teaches a parameter being at least one of translation error, rotation error or expansion error, with respect to the substrate (e.g. See C35 L51-C 36 L13).

As per claim 13, Irie et al. teaches diffractive elements (e.g. See C19 L56 - C 20 L5).

As per claim 14, Irie et al. teaches computations being performed by utilizing a least squares approach (e.g. See C2 L5).

As per claim 16, Irie et al. teaches projecting a pattern of radiation onto the substrate based on a parameter associated with a wafer model (e.g. See Figures 2-3 and their corresponding textual descriptions; also see C5 L1-24).

As per claim 17, the utilization of more than one substrate is taught by Irie et al. (e.g. See C17 L41-56).

Allowable Subject Matter

Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RONALD D. HARTMAN JR whose telephone number is (571)272-3684. The examiner can normally be reached on Mon.-Fri., 11:00 - 8:30 pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ronald D Hartman Jr./
Examiner, Art Unit 2121
September 11, 2008
RDH